DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-016723
Date Inspected: 29-Aug-2010

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 645
OSM Departure Time: 1845
Location: Shanghai, China

CWI Name: Yang Bai Qian.

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☐ Yes	☐ No	☑ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No	☐ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: Orthotropic Box Girder(OBG)

Summary of Items Observed:

On this date Caltrans OSM Quality Assurance (QA) Inspector, Amit K. Juvekar, was present during the times noted above for observations relative to the work being performed.

Subassembly, Bay 04, Deck Panel 14W-DP3176(PL3489A)-001.

This QA inspector performed conventional Ultrasonic Testing (UT) Inspection on deck panel tack weld areas. The inspection is preliminary prior to using the phased array (PAUT) testing system to verify indications found with conventional Ultrasonic testing. QA inspector performed UT on deck panel DP3176(PL3489A)-001, 4 ribs, 8 welds, 256 total tack welds inspected.

Weld 1 scanned 22 locations with 1 indication.
Weld 2 scanned 22 locations with no indications.
Weld 3 scanned 22 locations with 2 indications.
Weld 4 scanned 22 locations with no indication.
Weld 5 scanned 22 locations with no indications.
Weld 6 scanned 22 locations with no indications.
Weld 7 scanned 22 locations with no indication.
Weld 8 scanned 22 locations with no indications.

QA Inspector performed initial Phased Array Ultrasonic Testing (PAUT) following the guide lines of UT procedure titled “Phased Array Ultrasonic Testing for the Detection and Sizing of Suspected Planar Discontinuities (Cracks) in PJP Welds, # UT 04-0120F4 PJP Rib Weld” after conventional UT was performed on

tack welded areas of the Partial Joint Penetration (PJP) welds joining u-ribs to deck plate. The deck panels examined are as follows:

DP3176(PL3489A)-001: 1 tack weld locations found compliant and 2 tack weld location found non-compliant.

Subassembly, Bay 04, Deck Panel 14E-DP3176(PL3489B)-001.

This QA inspector performed conventional Ultrasonic Testing (UT) Inspection on deck panel tack weld areas. The inspection is preliminary prior to using the phased array (PAUT) testing system to verify indications found with conventional Ultrasonic testing. QA inspector performed UT on deck panel DP3176(PL3489B)-001, 4 ribs, 8 welds, 80 total tack welds inspected.

Weld 9 scanned 10 locations with no indication.
Weld 10 scanned 10 locations with no indications.
Weld 11 scanned 10 locations with no indications.
Weld 12 scanned 10 locations with no indication.
Weld 13 scanned 10 locations with no indications.
Weld 14 scanned 10 locations with no indications.
Weld 15 scanned 10 locations with no indication.
Weld 16 scanned 10 locations with no indications.

Subassembly, Bay 04, 14W, Deck panel to U-rib.

During Random Visual in process Inspection, this QA inspector observed ZPMC personnel carrying out Weld repairs after visual testing on Deck panel to U-rib welds of Deck Panel DP3174-001. Repair carried out with Flux core arc welding (FCAW). Welder is identified as 203805; ZPMC Quality Control Inspector (QC) is identified as Yang Bai Qian. The welding variables recorded by Quality Control Inspector (QC) appeared to comply with the Applicable WPS: WPS-345-FCAW-2G(2F)-FCM-REPAIR.

Welds & Approximate Y-locations of repair were;
W010 – 4800, 5300mm.
W009 – 5300mm.
W005 – 50, 650mm.

Subassembly, Bay 04, 14E, Deck panel to U-rib.

FCAW Repair welding of partial penetration weld joints DP3163(PL3439B)-001; located on subassembly, Bay 04, 14E. Welder is identified as 062265; ZPMC Quality Control Inspector (QC) is identified as Yang Bai Qian. The welding variables recorded by Quality Control Inspector (QC) appeared to comply with the Applicable WPS: WPS-345-FCAW-2G(2F)-FCM-REPAIR.

Welds & Approximate Y-locations of repair were;
W008 – 3300mm.
W004 – 5600mm.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

Summary of Conversations:

No relevant conversations.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang, 1500.042.2372, who represents the Office of Structural Materials for your project.

Inspected By:	Juvekar,Amit	Quality Assurance Inspector
Reviewed By:	Carreon,Albert	QA Reviewer